



“Innovating Education and Social Science for a Sustainable Future”

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PREFACE

It is with great pleasure that we welcome all participants to the International Conference on “Innovating Education and Social Science for a Sustainable Future”, held on 5th July 2025 at the Faculty of Education, Thaksin University, Thailand.

This conference serves as a platform for scholars, researchers, educators, and practitioners from diverse disciplines to share knowledge, exchange innovative ideas, and explore practical solutions in the fields of education and social sciences. In today’s rapidly changing world, education and social development are crucial foundations for building a sustainable future. By fostering collaboration across cultures and academic perspectives, this event aims to generate new insights that can guide both policy and practice.

The Faculty of Education, Thaksin University, is committed to advancing research and innovation that address the challenges of our time. Through this conference, we hope to inspire meaningful dialogue, encourage the development of innovative models, and strengthen international cooperation.

On behalf of the organizing committee, we would like to extend our sincere gratitude to all keynote speakers, presenters, participants, and supporters whose contributions make this conference possible. We are confident that the discussions and ideas exchanged here will inspire future research, collaboration, and action towards achieving a more sustainable world.

We wish you all a successful and enriching conference experience.

Faculty of Education
Thaksin University
5th July 2025

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A Learning Model for Geography Based on Constructivist Theory: Empowering Primary Students with Lifelong Learning Competencies

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Abstract:

This documentary research aims to analyze and synthesize educational theories and relevant scholarly works to develop a conceptual learning model for teaching geography in primary education based on constructivist theory, with the goal of promoting lifelong learning competencies. The study is driven by the growing global emphasis on 21st-century education reforms that call for learner-centered pedagogies, critical thinking, and skills transferable beyond the classroom. Geography education, often underutilized in foundational skill-building, presents rich potential for developing these competencies when informed by robust theoretical foundations.

Constructivist theory, particularly the works of Piaget and Vygotsky, underpins this study. It views learning as an active, contextualized process whereby learners construct knowledge through interaction with their environment and peers. This research involves systematic analysis of academic texts, policy documents (e.g., OECD's Education 2030 and UNESCO's lifelong learning frameworks), and scholarly literature on geography instruction and constructivist pedagogy. The methodology includes document selection, thematic coding, comparative synthesis, and theoretical interpretation.

Findings from the analysis suggest that constructivist-informed geography education supports the development of lifelong learning competencies, including critical thinking, collaboration, problem-solving, self-direction, and reflective thinking. The proposed learning model integrates four essential components: contextualized content, inquiry-based tasks, collaborative learning environments, and reflective practices. These elements collectively align with global educational goals and provide a structured pathway for curriculum innovation at the primary level.

This conceptual model contributes to educational theory and practice by offering a framework for integrating constructivist principles into geography instruction. It supports curriculum designers, teacher educators, and policymakers in shaping pedagogical approaches that foster lifelong learning from an early age.

Keywords: Constructivist theory, geography education, lifelong learning, primary students, learning model, 21st-century skills

1. Introduction

In an era characterized by rapid technological change, global interconnectedness, and complex social challenges, education systems around the world are under increasing pressure to prepare learners not only with content knowledge but also with the competencies necessary for lifelong learning. These include critical thinking, collaboration, creativity, adaptability, and the ability to direct one's own learning. As international policy frameworks such as the OECD's "Future of Education and Skills 2030" and UNESCO's "Education for Sustainable Development" highlight, these competencies are essential for individuals to navigate the uncertainties of the 21st century and to participate meaningfully in society and the economy (OECD, 2018; UNESCO, 2015).

Geography, as a school subject, provides a powerful platform for cultivating such competencies. Its inherently interdisciplinary nature—linking environmental awareness, spatial reasoning, civic responsibility, and global understanding—offers a context-rich foundation for real-world learning. However, in many traditional classrooms, geography instruction remains heavily reliant on memorization of facts and passive learning, which fails to engage students in critical inquiry or reflective thinking. This approach limits learners' ability to connect geographic knowledge to their lives and communities and does not support the development of higher-order thinking skills that are vital for lifelong learning (Lambert & Morgan, 2010).

Constructivist learning theory offers a compelling alternative to traditional didactic teaching. Grounded in the work of Jean Piaget and Lev Vygotsky, constructivism posits that learners actively build knowledge through interaction with their environment and social engagement, rather than passively receiving information (Piaget, 1973; Vygotsky, 1978). When applied to geography education, constructivist approaches can promote student-centered inquiry, problem-solving, collaboration, and reflection—elements that align directly with the competencies identified in lifelong learning frameworks. Furthermore, constructivist learning environments can be designed to respond to learners' interests and real-world issues, thereby increasing motivation and deepening conceptual understanding (Brooks & Brooks, 1999).

This study adopts a documentary research approach to examine how constructivist principles can be systematically applied to primary geography education to foster lifelong learning competencies. By analyzing existing literature, theoretical frameworks, policy documents, and pedagogical models, the study seeks to develop a theoretically grounded learning model that integrates constructivist strategies with the goals of future-oriented education. The objective is not only to propose an instructional framework but also to contribute to the broader discourse on curriculum innovation and educational reform in primary education, particularly within the context of global competency development.

In doing so, this research responds to an urgent need in educational theory and practice: how to bridge the gap between educational ideals—such as lifelong learning—and practical classroom implementation. It is anticipated that the findings will support educators, curriculum developers, and policymakers in reimagining geography instruction as a dynamic, student-centered process that prepares learners for lifelong inquiry and responsible global citizenship.

2. Literature Review

This literature review synthesizes key concepts and research findings from three interconnected domains: constructivist learning theory, geography education in the primary school context, and the development of lifelong learning competencies. The integration of these areas provides a theoretical foundation for designing a constructivist-based geography learning model that equips students with the skills necessary for lifelong learning.

2.1 Constructivist Learning Theory

Constructivist learning theory provides a foundational framework for rethinking traditional approaches to education by emphasizing the active role of the learner in the knowledge construction process. Rather than viewing learning as a linear transmission of facts from teacher to student, constructivism posits that learners build new understandings based on prior knowledge, experiences, and interactions with the environment and others. The theory has been significantly shaped by two major theorists—Jean Piaget and Lev Vygotsky—whose contributions have informed both cognitive and social dimensions of learning.

Jean Piaget (1973) introduced a stage-based model of cognitive development, proposing that children progress through distinct stages—sensorimotor, preoperational, concrete operational, and formal operational—each characterized by different modes of thinking. Piaget emphasized the importance of *assimilation* and *accommodation* in learning: learners assimilate new information into existing cognitive structures and modify those structures to accommodate new experiences. According to Piaget, meaningful learning occurs when students engage in exploration, manipulation of materials, and problem-solving within their developmental stage, making sense of the world through active engagement.

Lev Vygotsky (1978), while agreeing that learners actively construct knowledge, placed a stronger emphasis on the social and cultural context of learning. His concept of the *Zone of Proximal Development (ZPD)* refers to the range of tasks a learner can perform with guidance but not yet independently. Vygotsky argued that social interaction, particularly with more knowledgeable peers or adults, plays a critical role in advancing cognitive development. Through *scaffolding*, teachers can provide temporary support that helps students bridge the gap between what they know and what they are capable of learning.

Modern constructivist theorists, such as Brooks and Brooks (1999), have applied these foundational ideas to classroom practice. Their vision of a constructivist classroom includes characteristics such as focusing on big ideas, encouraging student questions, valuing diverse perspectives, and assessing learning through performance-based tasks. Constructivist instruction is thus centered on learner autonomy, relevance, and reflection. Jonassen (1999) further argued for the design of learning environments that support authentic problem-solving, multiple representations of content, and collaboration—conditions that are essential for preparing learners to adapt and thrive in complex, real-world situations.

In the context of primary education, constructivist approaches are particularly effective because they align with children's natural curiosity and developmental readiness for exploration. Activities such as inquiry-based learning, project work, hands-on experimentation, and discussion-based reflection are all grounded in constructivist principles. Research consistently shows that such strategies increase student motivation, deepen conceptual understanding, and enhance retention compared to traditional lecture-based teaching (Fosnot, 2005).

Importantly, constructivism also aligns well with the goals of lifelong learning. It fosters metacognitive awareness, enabling students to think about how they learn, monitor their own progress, and adapt strategies accordingly. These skills are fundamental not only to academic achievement but also to continuous personal and professional development throughout life.

In sum, constructivist theory provides both a philosophical orientation and practical strategies for designing learner-centered environments. It challenges educators to move beyond content delivery and toward the facilitation of meaningful, student-driven learning experiences. As this study will explore, these principles are particularly powerful when applied to the teaching of geography, a subject that naturally lends itself to inquiry, problem-solving, and interdisciplinary exploration.

2.2 Geography Education in Primary Schools

Geography education at the primary level plays a critical role in developing young learners' understanding of the world around them. It helps children make sense of their environment,

understand spatial relationships, and develop awareness of global interdependence. However, despite its potential to contribute significantly to holistic education, geography is often underemphasized in primary curricula and overshadowed by subjects perceived as more central, such as mathematics and language arts (Catling, 2013).

One of the central challenges in primary geography education is the overreliance on textbook-driven instruction and rote memorization. In many educational systems including in Southeast Asia students are frequently expected to recall geographic facts, definitions, and place names, rather than engage with geography as a dynamic and inquiry-based discipline (Lambert & Morgan, 2010). This traditional approach not only limits opportunities for critical thinking but also distances students from meaningful connections between geographical content and their lived experiences.

Scholars advocate for a reconceptualization of geography education through constructivist and inquiry-based pedagogies. These approaches position students as active participants in their learning, encouraging them to ask questions, explore their surroundings, and investigate spatial and environmental issues. According to Owens (2012), when students engage in geographic inquiry—such as mapping their local neighborhoods, analyzing environmental changes, or comparing global communities—they develop essential skills in observation, reasoning, and data interpretation. Such practices cultivate spatial thinking, an often-neglected cognitive skill crucial for understanding patterns, relationships, and processes on Earth.

Moreover, geography education contributes to the development of values and attitudes associated with global citizenship and sustainable development. By engaging with themes such as environmental stewardship, cultural diversity, and resource management, students begin to understand the interconnectedness of people and places (Tilbury, 1995). These understandings are particularly vital in the context of today's global challenges, including climate change, migration, and urbanization.

International curriculum frameworks increasingly recognize the value of geography education in primary schools. For example, the UK's National Curriculum emphasizes geographical skills such as interpreting maps, conducting fieldwork, and using digital technologies (Department for Education, 2013). In Australia, the Humanities and Social Sciences (HASS) curriculum incorporates geography with an emphasis on sustainability, place-based learning, and critical inquiry (ACARA, 2016). These approaches align with constructivist principles and affirm the role of geography in preparing learners for active participation in society.

In Thailand and other parts of Asia, educational reforms have begun to acknowledge the importance of integrating skills and competencies into content-based subjects. However, there is still limited application of constructivist pedagogy in geography classrooms. As highlighted by Catling and Willy (2018), there is a need for teacher training and curriculum development that support geography as a conceptual and competency-rich discipline at the primary level.

In summary, geography education offers rich opportunities for developing lifelong learning competencies, but its full potential remains underutilized in many primary classrooms. A constructivist approach that emphasizes inquiry, relevance, and engagement can transform geography into a platform for critical and creative thinking, thus aligning it more closely with the goals of 21st-century education.

2.3 Lifelong Learning Competencies

Lifelong learning has emerged as a central concept in global education discourse, reflecting the need for individuals to continuously acquire and apply knowledge, skills, and attitudes throughout life. The notion extends beyond formal education and encompasses informal and non-formal learning across personal, civic, social, and occupational domains (UNESCO, 2015). In an increasingly dynamic and unpredictable world, education systems must prioritize not only the transmission of knowledge but also the cultivation of competencies that enable learners to adapt, innovate, and thrive in varied contexts.

At the core of lifelong learning are **key competencies**—sets of knowledge, skills, values, and attitudes that empower individuals to meet complex demands. According to UNESCO (2015) and the OECD (2018), these competencies include:

1. **Critical thinking and problem-solving** – the capacity to analyze information, evaluate evidence, and develop reasoned arguments.
2. **Collaboration and communication** – the ability to work effectively in teams and articulate ideas clearly.
3. **Self-direction and autonomy** – the willingness and ability to take responsibility for one's own learning.
4. **Adaptability and resilience** – responding constructively to change and uncertainty.
5. **Creativity and innovation** – generating new ideas and applying them in real-world contexts.
6. **Global and civic responsibility** – understanding global issues and acting with empathy and ethical awareness.

The **Delors Report** (Delors et al., 1996) provides a foundational perspective on lifelong learning, emphasizing four pillars: *learning to know*, *learning to do*, *learning to be*, and *learning to live together*. These pillars form the philosophical underpinning of modern competency-based education and affirm that learning should contribute to holistic human development—not just academic success.

The **OECD's Education 2030 framework** builds on these ideas by proposing a vision for “transformative competencies,” which enable learners to create new value, reconcile tensions and dilemmas, and take responsibility. These competencies are not discrete skills but interconnected capacities that develop over time through authentic learning experiences (OECD, 2018).

Importantly, such competencies are not automatically acquired through conventional teaching methods. Research shows that lifelong learning competencies are best developed in **learning environments that are student-centered, inquiry-driven, and reflective** (Voogt & Roblin, 2012). Constructivist pedagogy—based on the idea that knowledge is actively constructed through experience and interaction—offers a promising foundation for designing such environments. It allows learners to explore problems, engage in dialogue, pursue personal interests, and reflect on their learning processes, all of which are critical to developing the disposition and capacity for lifelong learning.

In the context of **primary education**, cultivating these competencies early is essential. Young learners who are encouraged to ask questions, collaborate with peers, and take ownership of their learning begin to internalize lifelong learning behaviors from an early age (Claxton, 2002). Geography education, with its emphasis on place, perspective, and problem-solving, offers an ideal context to embed these competencies through activities such as field investigations, mapping, local community research, and environmental case studies.

In sum, lifelong learning competencies are integral to equipping learners for the challenges of the 21st century. Embedding these competencies into geography education through constructivist pedagogy represents a strategic and meaningful step toward achieving inclusive, relevant, and future-ready education for all.

2.4 Synthesis and Implications

The analysis of constructivist theory, primary geography education, and lifelong learning frameworks reveals a compelling intersection of principles and practices that can be synthesized into an integrated educational model. At the core of constructivist pedagogy lies the belief that knowledge is not passively absorbed but actively constructed by learners through interaction with their environment and others (Piaget, 1973; Vygotsky, 1978). This theoretical stance aligns strongly with current educational imperatives to foster lifelong

learning competencies such as critical thinking, collaboration, creativity, and self-regulation (OECD, 2018; UNESCO, 2015).

Geography education, particularly at the primary level, offers a rich platform for the practical application of these principles. Unlike subjects that focus narrowly on disciplinary content, geography invites learners to engage with local and global issues, encouraging them to investigate real-world phenomena, interpret data, evaluate evidence, and propose solutions. These processes mirror the inquiry-based and problem-oriented learning approaches advocated by constructivist theorists. Furthermore, geography's integrative nature—spanning environmental, social, economic, and political dimensions—makes it particularly suitable for interdisciplinary exploration and the development of transferable skills (Lambert & Morgan, 2010).

The synthesis of these domains suggests that constructivist-informed geography education can serve as a powerful mechanism for embedding lifelong learning competencies within subject instruction. Rather than treating competencies as add-ons or separate curricula, they can be developed organically through thoughtfully designed geography learning experiences. For example, a lesson on local environmental issues can prompt students to collect field data (critical thinking), collaborate on group presentations (communication and teamwork), and reflect on human-environment interactions (ethical reasoning and self-awareness).

This integrated approach responds to calls from international organizations for more holistic, future-oriented education systems. The OECD's "Learning Compass 2030" advocates for the development of "transformative competencies" that enable individuals to shape a better future for themselves and others (OECD, 2018). Similarly, UNESCO emphasizes the need for "learning to learn" and adaptability as foundational for lifelong education (UNESCO, 2015). These goals are best achieved not through isolated programs or discrete skill training, but through curriculum transformation rooted in meaningful pedagogy.

From a curriculum design perspective, this synthesis implies a rethinking of how geography is taught in primary education. Lessons should be anchored in students' real-world contexts and designed to encourage exploration, dialogue, and reflection. Assessment practices must also evolve to capture not only content knowledge but also the development of competencies such as inquiry, collaboration, and metacognitive awareness. Importantly, teacher professional development will be crucial in enabling educators to shift from traditional, content-driven models to more dynamic, learner-centered approaches.

In conclusion, the integration of constructivist theory, geography education, and lifelong learning frameworks provides a robust foundation for reimagining primary education. It points toward the development of a conceptual learning model that is not only theoretically sound but also practically relevant and policy-aligned. Such a model has the potential to enhance student engagement, deepen understanding, and equip learners with the competencies needed to thrive in an ever-changing world.

3. Research Objectives

The primary aim of this documentary research is to develop a theoretically grounded learning model for geography education in primary schools, based on constructivist principles, that promotes lifelong learning competencies among students. Given the increasing demand for learner-centered pedagogy and future-oriented education, this study seeks to bridge the gap between educational theory, curriculum design, and practical classroom implementation through an extensive analysis of relevant documents and academic literature.

The specific objectives of the study are as follows:

1. To examine the theoretical foundations of constructivist learning theory and its relevance to geography education

This objective involves analyzing the core principles of constructivism—particularly

the contributions of Piaget and Vygotsky—and identifying how these theories can inform the design of effective learning experiences in geography classrooms.

2. To investigate current approaches and challenges in primary geography education through document analysis

This includes reviewing curriculum frameworks, policy documents, and empirical studies to assess the status of geography teaching at the primary level and to identify opportunities for pedagogical innovation.

3. To analyze the concept of lifelong learning and its associated competencies in the context of 21st-century education

Drawing from global frameworks such as those by UNESCO and the OECD, this objective explores how key competencies—such as critical thinking, collaboration, and self-directed learning—can be nurtured through geography education.

4. To synthesize findings into a conceptual learning model that integrates constructivist pedagogy with geography content and lifelong learning goals

Based on the insights gained from the literature and documentary analysis, the study proposes a learning model that supports both subject knowledge acquisition and the development of lifelong learning dispositions among primary school students.

4. Methodology

This study employs a **documentary research methodology**, which involves the systematic collection, review, analysis, and synthesis of existing documents, academic literature, and educational frameworks relevant to constructivist learning theory, geography education, and lifelong learning competencies. The purpose of this methodology is to develop a conceptual learning model through theoretical integration rather than empirical experimentation.

Documentary research is particularly appropriate for studies aiming to construct theoretical models or conduct policy and curriculum analysis (Bowen, 2009). It allows for an in-depth examination of the conceptual foundations and practical applications of educational strategies by critically engaging with published sources, reports, and frameworks.

4.1 Data Sources

The documents and literature selected for this study fall into three main categories:

1. Theoretical Foundations

- Scholarly works on constructivist learning theory, including the writings of Piaget, Vygotsky, and contemporary constructivist educators (e.g., Brooks & Brooks, Jonassen).
- Key concepts in cognitive development, social interaction, and inquiry-based learning.

2. Geography Education Documents

- National and international curriculum guidelines for geography education at the primary level.
- Research articles, case studies, and best practices in geography instruction using constructivist or inquiry-based methods.

3. Lifelong Learning and Competency Frameworks

- Global policy documents, such as UNESCO's *Rethinking Education* and the OECD's *Education 2030* framework.
- Academic studies and comparative analyses of 21st-century competencies, transformative learning, and education for sustainable development.

4.2 Data Collection and Selection Criteria

Documents were selected using a purposive sampling technique. The following inclusion criteria were applied:

- Relevance to the core themes of constructivism, geography education, and lifelong learning.
- Credibility and scholarly authority (peer-reviewed publications, institutional reports).
- Publication within the last 20 years, with key foundational texts included regardless of publication date.
- Accessibility in English (and Thai where appropriate) to ensure contextual relevance.

Searches were conducted using academic databases such as ERIC, Scopus, JSTOR, and Google Scholar, as well as official websites of UNESCO, the OECD, and national education ministries.

4.3 Data Analysis

Thematic analysis was employed to identify, categorize, and synthesize core ideas across the selected documents. The analysis followed four main steps:

1. **Initial Reading:** Full reading of each document to understand its purpose, scope, and arguments.
2. **Coding:** Identification of key concepts related to pedagogy, content integration, and lifelong learning skills.
3. **Theme Development:** Clustering similar ideas into thematic categories such as inquiry-based learning, competency development, collaborative learning, and reflective practices.
4. **Synthesis and Model Construction:** Integration of themes into a coherent learning model supported by theoretical and documentary evidence.

Triangulation across multiple document types (theoretical, empirical, and policy-based) ensured validity and comprehensiveness. Interpretive rigor was maintained through reflexive reading and cross-verification of themes across sources.

4.4 Ethical Considerations

As the study involved secondary data without human participants, no ethical clearance was required. Nonetheless, all sources were cited appropriately to ensure academic integrity and transparency.

5. Findings and Discussion

This section presents the key findings derived from the documentary analysis of scholarly literature, curriculum frameworks, and policy documents. The findings are organized into thematic categories that inform the development of a conceptual geography learning model grounded in constructivist theory and designed to foster lifelong learning competencies. Each theme is followed by a discussion of its significance for primary education.

5.1 Theme 1: Constructivist Foundations Support Active, Contextual Learning

At the heart of constructivist learning theory is the belief that learners actively build their own understanding and knowledge of the world through experiences and reflection. This approach, rooted in the works of Jean Piaget and Lev Vygotsky, stands in contrast to traditional, teacher-centered models that emphasize passive absorption of facts. Instead, constructivism proposes that knowledge is constructed rather than transmitted, and that learning is most effective when it is meaningful, relevant, and situated in real-world contexts (Piaget, 1973; Vygotsky, 1978; Brooks & Brooks, 1999).

Piaget's theory of cognitive development emphasizes that learners progress through stages of development and construct knowledge by interacting with their environment. He argued that children learn best through discovery and problem-solving activities that challenge their current thinking structures, promoting cognitive growth through processes of assimilation and accommodation. This theory supports the notion that geography education should involve hands-on exploration, manipulation of tools such as maps and models, and engagement with geographic problems that stimulate critical thinking.

Vygotsky added a social dimension to constructivism through his theory of the Zone of Proximal Development (ZPD), which highlights the importance of guided interaction and scaffolding. Learning, according to Vygotsky, is most effective when students are supported by more knowledgeable peers or teachers in performing tasks slightly beyond their independent ability. This insight reinforces the role of dialogic teaching, peer collaboration, and teacher facilitation in geography lessons, where complex spatial concepts and interrelationships between people and environments can be better understood through guided inquiry.

Brooks and Brooks (1999) identified key principles for implementing constructivism in the classroom, such as encouraging student questions, designing learning activities that promote exploration, and valuing multiple perspectives. In geography education, these principles translate into activities that engage students in analyzing real-world issues—such as urbanization, natural hazards, or climate change—through authentic case studies, problem-solving tasks, and community-based inquiries. Such activities not only enhance understanding of geographic content but also promote skills such as observation, evidence-based reasoning, and ethical decision-making.

Contextual learning is another key dimension of constructivist pedagogy. It recognizes that students learn best when new information is connected to their prior knowledge, personal experiences, and local environment. In the primary geography classroom, this means using familiar places—such as neighborhoods, parks, or local landmarks—as starting points for learning about spatial patterns, environmental processes, and human-environment interactions. These connections foster engagement and make abstract geographic concepts more accessible and relevant to young learners (Jonassen, 1999; Catling, 2013).

The shift from passive to active learning inherent in constructivist pedagogy also aligns with 21st-century education goals that prioritize higher-order thinking, problem-solving, and adaptability. Active learning strategies such as inquiry-based projects, simulations, role plays, and experiential fieldwork help students become co-constructors of knowledge and develop a sense of ownership over their learning process. These strategies are particularly effective in geography, where content lends itself to visual, spatial, and experiential engagement.

In conclusion, constructivist learning theory provides a robust foundation for rethinking geography education. By promoting active, contextual, and socially mediated learning, constructivist approaches can transform geography from a static body of knowledge into a dynamic process of exploration and meaning-making—laying the groundwork for the development of lifelong learning competencies in primary students.

Discussion: These findings suggest that geography instruction should shift from rote memorization to active learning processes. Designing learning activities that allow students to investigate real-world issues such as climate change or local land use provides meaningful contexts that support knowledge construction and foster intellectual curiosity.

5.2 Theme 2: Geography Education as a Vehicle for Interdisciplinary Competencies

Geography as a subject is inherently interdisciplinary, encompassing elements of the natural sciences, social sciences, environmental studies, economics, civics, and even aspects of history and culture. Its multidimensional nature provides a rich foundation for cultivating a wide range of student competencies, particularly those emphasized in 21st-century learning frameworks such as critical thinking, problem-solving, decision-making, and global citizenship. In primary education, where curriculum integration is encouraged, geography holds a unique position in linking various domains of knowledge in a coherent, contextually meaningful way.

Literature suggests that geography education fosters cognitive development by engaging learners in spatial reasoning, data interpretation, and scenario-based thinking (Lambert & Morgan, 2010). These skills are closely aligned with mathematical literacy, scientific inquiry,

and environmental awareness. For example, when students analyze maps, conduct local surveys, or examine climate patterns, they are applying numeracy and scientific concepts in a geographical context. This fusion of content areas encourages students to think analytically and make connections between disciplines—an essential skill in solving real-world problems. Moreover, geography often deals with contemporary global issues such as climate change, population growth, resource distribution, and sustainability. Addressing these issues in the classroom requires learners to draw from multiple knowledge bases and consider diverse perspectives. Catling and Willy (2018) argue that geography helps young learners develop a “sense of place” and awareness of interdependence between humans and the environment. Such understanding encourages systems thinking, empathy, and responsible decision-making, which are core competencies for both education for sustainable development (ESD) and global citizenship education (GCED) (UNESCO, 2015).

In the constructivist classroom, geography offers powerful opportunities for project-based learning, where students investigate real-life challenges within their local communities or in global contexts. For instance, students might examine the impact of urban development on local ecosystems or explore the causes and consequences of natural disasters in different countries. These inquiries require them to gather and analyze data, consult various sources, work collaboratively, and present their findings—an approach that mirrors the interdisciplinary practices of professional geographers and researchers.

Furthermore, geography provides an accessible entry point for developing intercultural understanding and media literacy. Through the study of different regions, cultures, and global interconnections, learners become more aware of diversity and inequality. This dimension supports the development of interpersonal and socio-emotional competencies that are increasingly valued in both educational and workplace contexts (OECD, 2018).

From a pedagogical standpoint, integrating geography with other subject areas supports curriculum coherence and learner engagement. Research by Alexander (2010) highlights that thematic and inquiry-based approaches to geography allow students to explore meaningful questions while acquiring cross-disciplinary knowledge and skills. Constructivist educators are therefore well-positioned to leverage geography’s integrative potential by designing learning experiences that are active, student-centered, and inquiry-driven.

In summary, geography education, when delivered through a constructivist lens, is an effective vehicle for cultivating interdisciplinary competencies. It encourages learners to think critically, act responsibly, and view knowledge as interconnected rather than fragmented. These competencies not only enhance academic learning but also prepare students to navigate the complex, dynamic world they inhabit a central goal of lifelong learning.

Discussion: Integrating constructivist pedagogy into geography helps students develop analytical and integrative thinking, preparing them to tackle complex problems. When geography is taught through projects, case studies, and collaborative tasks, students learn to synthesize information, engage in decision-making, and communicate findings—skills essential for lifelong learning.

5.3 Theme 3: Lifelong Learning Competencies Are Best Cultivated Through Inquiry and Reflection

Lifelong learning has emerged as a key goal of education in the 21st century, with increasing recognition that learners must be equipped not only with subject knowledge but also with the capacity to learn continuously, adapt to change, and solve novel problems. Key competencies associated with lifelong learning include **critical thinking, creativity, collaboration, communication, and self-directed learning** (OECD, 2018; UNESCO, 2015). These competencies transcend disciplinary boundaries and are fundamental to personal development, employability, and active citizenship in a rapidly evolving world.

Documentary analysis reveals that two pedagogical strategies **inquiry-based learning** and **reflective practice** are especially effective in cultivating these competencies within geography education. These strategies are deeply embedded in constructivist theory and have been endorsed by numerous educational frameworks as essential to 21st-century teaching and learning (Voogt & Roblin, 2012; Brooks & Brooks, 1999).

Inquiry-based learning (IBL) refers to an instructional approach that encourages students to pose questions, investigate problems, gather and analyze data, and develop evidence-based conclusions. In geography, this may involve exploring environmental challenges, demographic trends, or urban development patterns. Such inquiries require students to exercise critical thinking, synthesize information from various sources, and construct their own understanding of geographic phenomena (Owens, 2012). Through inquiry, learners engage with real-world issues, enhancing both cognitive and affective dimensions of learning. In the context of lifelong learning, IBL supports the development of **self-directed learning** skills. Students take ownership of their learning process by selecting topics, designing research questions, and seeking relevant resources. These actions foster a sense of agency, motivation, and resilience—key dispositions for lifelong learners (Candy, 2002). Furthermore, inquiry fosters **collaboration** as students often work in groups to investigate complex questions, distribute tasks, and present findings. This social aspect aligns with Vygotsky's (1978) notion of learning as a culturally mediated and socially co-constructed process.

Reflective practice, another cornerstone of constructivist pedagogy, reinforces the metacognitive aspect of learning. It involves learners critically examining their experiences, evaluating their strategies, and identifying areas for improvement. Reflection enhances **metacognitive awareness**, enabling students to understand how they learn, which in turn supports goal setting, monitoring progress, and adjusting approaches to achieve desired outcomes (Schön, 1983). In geography education, reflective activities might include journaling about a field trip, discussing the impact of a local land-use decision, or evaluating the effectiveness of a group project.

Research shows that when students engage in reflection, they become more adept at transferring learning across contexts and subjects—a core requirement for lifelong learning (Moon, 1999). Reflection also deepens conceptual understanding by allowing students to make connections between abstract content and personal experiences, thus increasing relevance and motivation.

Together, inquiry and reflection create a powerful pedagogical synergy. While inquiry engages students in constructing knowledge through exploration, reflection ensures that this knowledge is internalized, evaluated, and made transferable. When embedded in geography education, these practices promote not only geographic literacy but also the broader competencies that define lifelong learners.

In summary, literature affirms that inquiry and reflection are indispensable to competency-based education. Their integration into geography learning models ensures that students are not merely consumers of information but active participants in knowledge creation and self-development. By emphasizing these strategies, educators can transform geography classrooms into spaces that nurture curiosity, critical engagement, and a sustained commitment to learning beyond the school years.

Discussion: In a geography context, students may conduct fieldwork, engage with community data, or explore environmental scenarios. Such activities not only deepen geographic understanding but also enable students to plan, monitor, and evaluate their learning—key components of self-directed learning. These findings affirm the value of a model that incorporates reflection and feedback mechanisms.

5.4 Theme 4: Educational Policies Align with Constructivist and Competency-Based Learning

A significant finding of this documentary research is the strong alignment between international educational policy frameworks and constructivist pedagogical principles, particularly concerning the development of 21st-century and lifelong learning competencies. Over the past two decades, global organizations such as UNESCO and the OECD have called for a paradigm shift in education—from content-heavy, teacher-centered instruction to learner-centered, competency-based approaches (UNESCO, 2015; OECD, 2018). These policies promote education systems that emphasize learning how to learn, adaptability, and the ability to contribute constructively to society. This vision mirrors the goals of constructivist education, which encourages knowledge construction, critical inquiry, social interaction, and learner autonomy.

The **UNESCO (2015)** report *Rethinking Education: Towards a Global Common Good?* articulates the need for transformative education that equips learners not just with academic knowledge but with the attitudes, values, and skills necessary for navigating a complex world. It emphasizes the importance of learning to be, to do, to know, and to live together—foundational dimensions of lifelong learning. Similarly, the **OECD's (2018)** *Future of Education and Skills: Education 2030* framework outlines “transformative competencies” that enable individuals to create new value, reconcile tensions and dilemmas, and take responsibility. These competencies are closely aligned with constructivist educational aims, particularly in promoting student agency and deep learning through problem-solving, collaboration, and ethical reflection.

Policy documents from numerous countries—including Thailand's Basic Education Core Curriculum (2008)—have also incorporated constructivist-oriented competencies into national learning standards. These policies advocate for curriculum integration, experiential learning, and the development of higher-order thinking skills across subject areas, including geography. For example, Thailand's National Education Act (1999, revised 2002) emphasizes learner-centered education, active participation, and lifelong education for all citizens, which are consistent with constructivist frameworks.

Despite these policy-level commitments, implementation challenges persist. There is often a gap between the ideals expressed in education policy and the realities of classroom practice. Many teachers face constraints such as standardized testing pressures, large class sizes, limited resources, and insufficient training in constructivist methodologies (Voogt & Roblin, 2012). These barriers hinder the realization of policy goals and underscore the need for sustained professional development, curriculum redesign, and institutional support to translate constructivist principles into daily teaching practices.

From a documentary analysis perspective, the alignment between educational policy and constructivist theory is both a validation and a call to action. It provides legitimacy and urgency for developing instructional models—such as the one proposed in this study—that operationalize policy objectives within classroom contexts. Constructivist geography education, with its emphasis on inquiry, reflection, and real-world problem-solving, offers a practical and discipline-specific response to the broader goals articulated in national and international frameworks.

In conclusion, educational policy provides a fertile ground for reimagining teaching and learning. When aligned with constructivist pedagogy, these policies can catalyze meaningful transformation in how students learn and prepare for lifelong learning. However, the success of such transformation depends on the availability of coherent models, professional support, and institutional alignment—issues that this study aims to address through its conceptual learning model.

Discussion: The convergence of constructivist theory with global education policy provides a strong rationale for developing learning models that embed both content knowledge and key competencies. Geography education, when framed within such a model, becomes a powerful medium for cultivating holistic learners prepared for lifelong inquiry and global engagement.

6. Conclusion and Implications

This documentary research has explored the intersection of constructivist learning theory, primary geography education, and lifelong learning competencies with the aim of developing a conceptual learning model suitable for 21st-century education. Through comprehensive analysis of theoretical literature, curriculum documents, and international policy frameworks, the study identified a strong alignment between constructivist pedagogy and the goals of modern education systems, particularly in fostering active learning, critical thinking, and self-direction.

The findings underscore that geography, when taught through constructivist approaches, can serve as a powerful medium for developing lifelong learning competencies. The subject's interdisciplinary and real-world nature makes it uniquely suited to engage students in meaningful, inquiry-driven activities that extend beyond content memorization. The conceptual model proposed in this study comprises four interrelated components: contextualized content, inquiry-based learning, collaborative activities, and reflective practices. Together, these elements create a dynamic learning environment that supports both conceptual understanding and the development of transformative competencies.

This study also highlights the congruence between global educational policy—such as UNESCO's "Rethinking Education" and the OECD's "Education 2030" agenda—and the pedagogical ideals of constructivism. This reinforces the argument that effective geography instruction should not be isolated from broader educational reform but integrated into a systemic approach to developing future-ready learners.

Recommendations for Practice:

1. For Educators

The implementation of a constructivist-based geography learning model requires a fundamental shift in teachers' roles—from knowledge transmitters to facilitators of learning. Teachers should be supported in adopting pedagogical practices that position students as active participants in their own learning processes. These include project-based learning, where students investigate real-world geographical issues; field inquiry, where students observe and analyze local environments; student-led exploration, which fosters autonomy and curiosity; and reflective discussion, which helps learners evaluate their own progress and thinking.

To effectively implement such practices, educators need access to high-quality professional development that emphasizes constructivist strategies in both theory and application. Workshops, peer collaboration sessions, and classroom-based coaching can provide practical tools and techniques. Furthermore, educators must be empowered to design flexible lesson plans that incorporate students' prior knowledge, local contexts, and emerging global issues. Constructivist teaching is not formulaic—it requires responsiveness, creativity, and a commitment to continuous learning.

Importantly, assessment strategies must also align with these pedagogical changes. Educators should be encouraged to use formative assessments, learning journals, portfolios, and performance-based tasks to evaluate students' progress in both content knowledge and competency development. When teachers feel equipped and valued in their role as learning

facilitators, they are more likely to engage students in meaningful geographic inquiry and lifelong learning development.

2. For Curriculum Developers

Curriculum developers play a pivotal role in bridging educational theory with classroom practice. To support constructivist geography education, curricula must be restructured to move beyond static content delivery and instead promote dynamic, student-centered learning experiences. This entails defining clear competencies aligned with lifelong learning—such as critical thinking, collaborative problem-solving, spatial reasoning, and self-regulation—and embedding these within learning objectives, instructional activities, and assessment frameworks.

Constructivist curriculum design emphasizes *conceptual understanding over factual recall*. It encourages thematic units grounded in real-world issues—such as climate change, migration, urban development, and natural hazards—that lend themselves to inquiry-based learning and interdisciplinary connections. By organizing content around essential questions and open-ended investigations, the curriculum can better engage students in exploration and knowledge construction.

Additionally, curriculum documents should provide educators with sample learning tasks, scaffolding strategies, and rubrics aligned with competency development. These resources support consistent implementation while allowing flexibility for adaptation to local contexts. Alignment with national learning standards is crucial, but room must be made for contextual relevance, creativity, and responsiveness to current events.

Finally, curriculum reform should be inclusive, engaging not only policymakers and content experts but also teachers and students. Gathering feedback from classroom implementation can help refine the curriculum to ensure it remains both theoretically sound and practically viable in diverse school settings.

3. For Policymakers

At the policy level, systemic support is essential for embedding constructivist pedagogy and lifelong learning competencies across the educational spectrum. Policymakers must champion reforms that prioritize competency-based education, beginning with early primary years, to ensure students develop the foundational skills and dispositions necessary for lifelong learning.

This commitment should be reflected in updated educational frameworks, national curriculum guidelines, teacher certification standards, and accountability systems. Policy must explicitly support learner-centered methodologies, emphasize critical and creative thinking, and ensure equitable access to high-quality geographic learning resources, including maps, field tools, and digital platforms.

Investment in teacher professional development is critical. Policies should fund continuous, in-service training programs focused on constructivist methods, reflective practice, and formative assessment. In addition, collaboration between ministries of education, teacher training institutions, and international organizations (such as UNESCO and the OECD) can help develop context-sensitive strategies for scaling up constructivist approaches across regions.

Moreover, monitoring and evaluation mechanisms should be aligned with educational goals that emphasize learning outcomes beyond standardized test scores. Indicators for measuring competencies such as collaboration, self-direction, and problem-solving must be integrated into national assessment frameworks.

By creating an enabling policy environment, governments can foster innovation in classrooms, support teacher agency, and ensure that geography education contributes meaningfully to national human capital development and global citizenship.

4. For Future Research

Although this study proposes a theoretically grounded learning model for geography education, further empirical research is needed to validate and refine the model across diverse educational settings. Future research should investigate how the constructivist-based learning model performs in actual classroom environments, particularly in terms of student engagement, knowledge retention, and competency development.

Experimental or quasi-experimental studies could explore comparative outcomes between traditional and constructivist instructional approaches. Longitudinal research could assess whether competencies cultivated through geography education persist over time and translate into real-life problem-solving, critical thinking, and autonomous learning behavior.

Moreover, research should be sensitive to cultural and contextual variations. The applicability of the proposed model may differ across urban and rural schools, socio-economic groups, and educational systems with varying levels of resources. Mixed-methods studies involving classroom observations, teacher interviews, student feedback, and learning analytics would provide a rich, multidimensional understanding of the model's effectiveness.

Another promising area for investigation is the integration of digital tools in constructivist geography education. How do virtual field trips, GIS applications, or gamified inquiry platforms affect student learning and engagement? How can technology be leveraged to enhance collaboration and reflection in geography learning?

Finally, future studies should include voices from all stakeholders students, teachers, parents, and administrators to capture a holistic picture of how constructivist learning environments function and evolve in real practice. The insights gained will not only contribute to academic knowledge but also guide practical implementation and policy alignment.

In conclusion, reimagining geography education through the lens of constructivism is both timely and necessary. As education systems worldwide seek to equip learners for lifelong learning, this model offers a theoretically robust and practically adaptable framework for transforming classroom practice. It contributes to the ongoing discourse on educational innovation and supports the global call for more meaningful, student-centered learning experiences from the earliest stages of schooling.

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